RSC | Advancing the Chemical Sciences

RSC submission to the Defra consultation into Environmental Reporting Guidelines - Key Performance Indicators.

The Royal Society of Chemistry (RSC) welcomes the opportunity to comment on the Defra consultation into Environmental Reporting Guidelines - Key Performance Indicators.

The RSC is the largest organisation in Europe for advancing the chemical sciences. Supported by a network of 45,000 members worldwide and an internationally acclaimed publishing business, our activities span education and training, conferences and science policy, and the promotion of the chemical sciences to the public.

This document represents the views of the RSC and has been put together by our Environment, Sustainability and Energy Forum (ESEF) in close collaboration with the Water Science Forum (WSF) and the Occupational and Environmental Toxicology Group (OETG). The RSC's Royal Charter obliges it to serve the public interest by acting in an independent advisory capacity, and we would therefore be very happy for this submission to be put into the public domain.

The document has been written from the perspective of the Royal Society of Chemistry consequently our comments relate to only parts of the consultation document. However, the chemical sciences and chemical scientists are vital for both the measurement and abatement of environmental impacts.

The answers to the consultation feedback questionnaire questions can be found below:

1. How well does the document set out and clarify the environmental reporting landscape?

The RSC welcome the introduction of environmental reporting into business statutory report and accounts.

Overall individual organisations reporting on their environmental impact and the steps they are taking to mitigate and reduce them is the correct way to move forward.

Through our consultation of the RSC membership, **several criticisms** have been raised in relation to the document; these are detailed below:

The present draft of the guidelines does not appear to recognise the potential for **cooperative and supply chain approaches** to minimise environmental impact. The RSC believes that current guidance will lead to sub-optimal solutions as organisations minimise their own environmental footprint without considering up stream and down stream issues.

The converse is also true; an apparent decrease in environmental performance in one area may bring much improved benefit and sustainability in another area of the supply chain. One example of this is the apparent increase in energy use in the water treatment processes - this is required to meet higher standards to give greater environmental improvement down stream of waste water treatment plants and improved public health protection from drinking water.

On a similar note companies producing products that have an environmental benefit downstream (such as windmills, energy efficient electronic goods, etc.) will not gain a significant advantage through environmental reporting under this system.

The RSC also believes that the reporting guidance should include an organisational comparison with current Best Practise in energy, water and waste management, plus the steps being taken by individual organisations to meet or exceed Best practise.

2. Have the most relevant KPIs been identified for each sector?

General comment:
The categories in the most part are too broad for the manufacturing industry. It seems an over simplification to assume that two companies within a broad sector will have similar product outputs and therefore different KPIs will probably be relevant.

It is also noted that there is no category for Government Departments. Will Defra be reporting their environmental performance under this scheme? Perhaps such a document could be used as a model for Governmental environmental reporting.

Specific comments
On page 21:
The chemical industry is too diverse and complicated to be categorised under the heading "**manufacture of chemicals and chemical products**". The KPIs and upstream and downstream relationships vary a great deal dependent on the nature of the industry. Typically the chemical industry is divided into:

- Petrochemicals
- Bulk chemicals
- Fine chemicals
- Pharmaceuticals

But this is an oversimplification. For example a company synthesising chemical intermediates will have different environmental impacts to a company making precious metal catalysts even though both industries may fall under the same category. Perhaps a more sensible route would be to use an existing system such as Standard Industrial Classification (SIC) codes, which at least differentiates between industries.

On page 24:

Research and development seems like a classification that should subsumed within its parent sector as it should have similar environmental impacts. For example research and development in the chemical industry has pretty much the same outputs (albeit at a smaller scale) as the manufacturing chemical industry.

3. Are the number of KPIs sufficient. Are there KPIs that should be added and/or removed?

No comments.

4. Please comment on the technical reporting methodologies for each KPI.

General comments about the KPIs:
There is not sufficient detail provided on how to calculate KPIs. For example how would a farmer calculate GHG emissions from a dairy herd (considering methane from the cows)? How would the same farmer acquire the technical knowledge to calculate the contribution to eutrophication/acidification from fertiliser run-off? Without being a technical expert in the subject it is unlikely that a number of companies would be able to calculate KPIs based on this document. Such calculations would be made much easier by Defra developing (or displaying a link to) a **scientifically accepted calculation tool** that provided the requisite information based on readily available data from the company (i.e. electricity use per annum, quantity of fertiliser per annum, water usage per annum, etc.).

The level of detail available on each KPI varies tremendously. Global warming (KPI 1) has a much greater level of detail compared to any subsequent KPI. Is this because of a lack of information on other KPIs or because of a weighting towards greenhouse gases?

Specific comments on individual KPIs:

- KPI 7 Discharge consents could give indication. The method used to estimate the content of the discharge should be stated in the report to facilitate comparison. A further comment here is that the source of organic pollutants was from the US EPA, whereas for the UK a more sensible source of organic pollutants would be the UK Chemical Stakeholder Forum (www.defra.gov.uk/environment/chemicals/csf/). It was noted that some of the pollutants listed were somewhat esoteric and that dioxins were a notable by their absence.
- KPI 8 Discharge consents could give an indication. The method used to estimate the emission should be stated.
- KPI 9 Details of the technique used for sampling and monitoring should be given to enable comparisons to be made.
- KPI 15 appears sound.
- KPI 25 could also be used to estimate the impact on measures undertaken to reduce the values in the other KPIs.

5. Please comment on the style and content of the document.

Specific comments on the content of the document:

On page 7:
Cost savings and productivity gains
The document indicates the benefits of best environmental practice but doesn't actually go on to cite sources where examples and methods of Best Practice can be accessed. Surely Government sponsored initiatives such as Envirowise (www.envirowise.gov.uk/) and the Carbon Trust (www.thecarbontrust.co.uk) are a source of Best Practice already sponsored by the Government.

Improved sales
Whilst it possible that a small percentage consumers will read CSR reports I don't think that the majority will. Therefore a clear environmental labelling scheme, such as that used on kitchen appliances (and also in trial for motor vehicles), would be more transparent and of greater benefit to consumers generally. Schemes such as the EU eco-label, White Swan and Blue Angel could be used as a model for such a scheme.

Preferred supplier status
Large organisations are increasingly demanding better environmental performance from suppliers (for example Marks and Spencer). This pressure can also be considered a legitimate route to improved environmental performance from suppliers.

On page 11:
All of the principles and processes on this table are agreeable but there are several questions arising from how such reporting will be possible across the board, for example:

- Will workshops be run to educate companies on reporting strategies? If so how do you ensure that a sufficient cross section of UK industry attends? Who will run such workshops?
- Do you expect SMEs to take the time to calculate KPIs relevant to their sector? It would seem far more sensible for Defra to develop an **online calculator** for common KPIs (e.g. those relating to energy consumption or water usage) which could rely on data taken from a meter or a bill. Defra could also use such a calculator to collect data (although this could raise a number of confidentiality questions).

6. Is the document useful in assisting companies to report on their environmental performance?

General comments on the document:
The document fails to find the right balance between addressing the large and small companies. Typically large companies (such as Unilever) already report upon their environmental performance. Here one of the key issues is standardising environmental

reporting so that such organisations performance can be easily compared. For smaller companies it is unlikely they are currently reporting on environmental performance and this document does little encourage such companies to spend time calculating KPIs as the methodology and benefits are unclear. Clear case studies detailing transparent and beneficial cost benefit analysis of environmental programmes relevant to small businesses would be a good addition to either this document or the parent Defra website. A scientifically accepted web based calculator that can be accessed by companies to calculate common KPIs using data from electricity and water meters would also be a sensible addition to this programme.

Specific comments on the document:

On page 9 (current reporting situation):
SME's are blamed for the majority of the pollution incidents in the UK and over half the industrial waste generated, whilst this may be true it does not offer positive encouragement for SME's to engage in environmental reporting. A better strategy would be to detail actual case studies based on cost savings through implementation of environmental programmes (including the cost of the programmes). **Envirowise** and **the Carbon Trust** would seem like ideal partners for achieving this.

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